Introduction to Costing Methods

1 Product Costing Overview

Product costing = process of **accumulating, classifying, and assigning**:

- **Direct Materials (DM)**
- **Direct Labor (DL)**
- **Factory Overhead (OH)**
  to products, jobs, or services.

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2 Three Costing Method Choices

Management must choose:

1. **Cost measurement method** → *Standard, Normal, or Actual costing*
2. **Cost accumulation system** → *Job costing* or *Process costing*
3. **Overhead allocation method** → *Volume-based* or *Activity-based (ABC)*

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3 Cost Accumulation Systems

Two systems to collect and assign costs:

Type	Used When	Cost Collected By
Process Costing	Identical units (assembly line)	Department or process
Job Order Costing	Unique, distinct units	Job or order

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4 Cost Measurement Methods

Used to assign costs to products:

1. **Standard Costing**
2. **Normal Costing**
3. **Actual Costing**

(Only **Standard Costing** discussed here.)

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5 Standard Costing Explained

- Uses **planned (standard)** costs for each input.
- The **standard cost per unit** =
  (Standard price per input unit) × (Standard quantity of input per output unit)

- 🔹 Applied to **DM**, **DL**, and **OH**.
- 🔹 Actual costs may differ — the **difference = variance**.

Example:
If 3 DL hours are allowed per unit and 100 units are produced:
→ Allowed hours = 3 × 100 = 300 hours
→ Standard DL cost = Standard rate × 300 hours

✅ Use **standard** quantities & prices for **actual output** — not actual quantities or prices used.

6️⃣ Overhead in Standard Costing

Overhead is applied using a **predetermined (standard) rate**:

$$\text{Predetermined OH Rate} = \frac{\text{Budgeted OH Cost}}{\text{Budgeted Activity Level (allocation base)}}$$

Common allocation bases:

- Labor hours or cost → labor-intensive process
- Machine hours → machine-intensive process

Applied OH = Predetermined rate × Standard amount of allocation base allowed for actual output.

7️⃣ Variances

Difference between **actual OH cost** and **applied OH cost**:

- **Under-applied** = actual > applied
- **Over-applied** = actual < applied

Treatment:

- If **immaterial** → close to **COGS**
- If **material** → prorate among **COGS**, **Finished Goods**, and **WIP**

8️⃣ Key Concepts

- **Inventory valuation** = standard cost per unit × actual units produced
- **Flexible budget** = standard cost per unit × actual production volume
- Enables timely cost control and variance analysis.

9️⃣ Applicability

Organization Type	Examples of Direct Inputs	Overhead Examples
Manufacturing	Materials, labor	Factory rent, utilities
Retail/Service	Food, wages	Rent, utilities, manager salary

🔟 ERP (Enterprise Resource Planning)

- ERP systems integrate business processes.
- Help track **standard vs. actual costs** and **variances** in real time.
- Covered later under **Supply Chain Management (D.4)** and **Information Systems (F.1)**.

Normal Costing & Actual Costing

2️⃣ Normal Costing

📘 Definition

Normal costing applies:

- **Direct Materials (DM)** and **Direct Labor (DL)** at **actual rates × actual quantities used**
- **Overhead (OH)** at a **predetermined rate × actual allocation base used**

$$\text{Predetermined OH Rate} = \frac{\text{Budgeted OH}}{\text{Budgeted Activity Level of Allocation Base}}$$

This **predetermined rate** is also called a **normal rate** or **normalized rate**.

📊 Characteristics

Feature	Description
DM & DL	Actual cost per input × Actual quantity used
OH	Predetermined (budgeted) rate × Actual allocation base used
Main Purpose	To smooth fluctuations in overhead cost per unit
Environment	Mainly **Job Costing** (not suitable for process costing)
Reason	Process costing makes tracing actual DM & DL by run difficult
Benefit	Gives timely cost info without waiting for all actual overhead data

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⚙️ Why Use Normal Costing?

- Avoids **monthly fluctuations** caused by changes in production or overhead.
- Provides **current cost data** faster than actual costing.
- Better for **management decisions**, **pricing**, and **cost control**.

3️⃣ Actual Costing

📘 Definition

All inputs (DM, DL, OH) are applied at their **actual costs**.

$$\begin{aligned}\text{Total Cost per Unit} &= (\text{Actual DM Rate} \times \text{Actual DM Qty}) + (\text{Actual DL Rate} \times \text{Actual DL Qty}) \\ &+ (\text{Actual OH Rate} \times \text{Actual Base})\end{aligned}$$

📊 Characteristics

Feature	Description
DM & DL	Actual rate × Actual quantity used
OH	Actual rate × Actual allocation base used
Environment	**Job Costing only** (not for process costing)
Drawback	Cost per unit fluctuates with monthly variations
Effect	Can distort pricing, performance evaluation, and product-line decisions
Use	Rare in practice — too unstable for most manufacturing environments

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⚖️ Comparison Summary Table

Aspect	Standard Costing	Normal Costing	Actual Costing
Usual Environment	Job or Process	Job	Job
Direct Materials & Labor Rate	Standard	Actual	Actual
Direct Materials & Labor Quantity	Standard allowed for actual output	Actual used	Actual used
Overhead Rate	Predetermined (Standard rate)	Predetermined (Normal rate)	Actual rate

Aspect	Standard Costing	Normal Costing	Actual Costing
Overhead Base	Standard allowed for actual output	Actual base used	Actual base used
Cost Source	Planned/Expected	Part actual + part budgeted	100% Actual
Cost Stability	Stable	Stable	Fluctuates
Speed of Information	Fast (uses standards)	Fast (uses budgeted OH)	Slow (requires actual OH data)
Variance Analysis Possible?	Yes (vs. standard)	Limited	No
Best For	Control and performance measurement	Timely costing in job environments	Detailed historical costing

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🧭 **Quick Exam Tips**

✅ **Direct Inputs:**

- **Standard Costing:** standard rate × standard quantity allowed × actual output
- **Normal/Actual Costing:** actual rate × actual quantity used × actual output

✅ **Overhead:**

Method	Rate	Base
Standard	Predetermined	Standard base allowed for actual output
Normal	Predetermined	Actual base used
Actual	Actual	Actual base used

✅ **Key Difference Between Standard vs. Normal:**
→ Both use a **predetermined OH rate**,
but **Standard Costing** applies it to **standard base**,
while **Normal Costing** applies it to **actual base**.